

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A portable digital microscope imaging system, comprising:
a sensor having a plurality of pixels; and
a microscopic optical system that maps the plurality of pixels to an object field of view, where at least one pixel from the plurality of pixels are is scaled to about a size of a diffraction-limited spot defined by the microscopic optical system.
2. (Currently Amended) The system of claim 1, further comprising an excitation source for the microscopic optical system including at least one of a light source, and a Luxeon Star.
3. (Currently Amended) The system of claim 1, further comprising an enclosure for the microscopic optical system and the sensor.
4. (Currently Amended) The system of claim 3, further comprising a processor or computer that is adapted for at least one of an operation within the enclosure of the microscopic optical system and an operation external to the enclosure of the microscopic optical system in order to facilitate image generation.
5. (Currently amended) The system of claim 2, further comprising a holographic diffuser element to facilitate generation of an image.
6. (Original) The system of claim 1, the optical system and the sensor are associated with a digital camera.

7. (Original) The system of claim 1, the sensor is adapted for at least red, green, blue, and at least one other color.

8. (Original) The system of claim 1, the optical system and sensor are employed in at least one of a remote medicine application and an industrial application.

9. (Original) The system of claim 1, further comprising at least one of an objective turret, a manual or automatic adjustment, an iris control, a projection module, and an illumination module.

10. (Original) The system of claim 1, further comprising at least one of an AC or DC power supply.

11. (Original) The system of claim 1, further comprising a port for transferring digital images between locations or devices.

12. (Original) The system of claim 11, the port is associated with at least one of a parallel port, a wireless port, a printer port, a USB port, and a Firewire port.

13. (Currently amended) A digital microscope camera, comprising:

a sensor having a plurality of pixels; and

a microscopic lens configuration that maps the plurality of pixels to an object field of view, where at least one pixel from the plurality of pixels ~~are~~ is correlated to about a size of a diffraction-limited spot defined by the microscopic lens configuration.

14. (Original) The digital camera of claim 13, the pixels are associated with at least four colors.

15. (Currently Amended) A digital microscope imaging system, comprising:
- a light source to illuminate a specimen;
 - a holographic diffuser associated with the light source;
 - a microscopic optical medium to magnify the specimen; and
 - a sensor having a plurality of pixels for receiving light from the specimen in accordance with the microscopic optical medium, where at least one pixel from the plurality of pixels is correlated to about a size of a diffraction-limited spot defined by the microscopic optical medium.
16. (Original) The system of claim 15, further comprising a memory to store information from the pixels.
17. (Previously Presented) The system of claim 15, the optical system and the sensor are associated with a digital camera.
18. (Previously Presented) The system of claim 15, further comprising at least one of an AC or DC power supply.
19. (Previously Presented) The system of claim 15, further comprising a port for transferring digital images between locations or devices.
20. (Previously Presented) The system of claim 19, the port is associated with at least one of a parallel port, a wireless port, a printer port, a USB port, and a Firewire port.